



CRITICAL REAGENTS PROGRAM FACT SHEET

Certified ISO 9001 Organization

ABOUT THE CRP

As a national resource for the biological defense community, the CRP serves as the principal resource of high quality, validated, and standardized biological reference materials, reagents, and assays that meet the technology-development and sustainment needs of the Department of Defense and its partners. The CRP also supports the biological defense community's mission by facilitating the transition of new technologies and coordinating their advanced development, efficient production and timely distribution.

The CRP product portfolio includes antibodies, inactivated antigens, genomic materials, Electrochemiluminescence (ECL) assays, Polymerase Chain Reaction (PCR) assays, Lateral Flow Immunoassays (LFIs), and Biological Sampling Kits.

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Lateral Flow Immunoassays (LFI)

Description

A Lateral Flow Immunoassay (LFI) is an antibody-based test designed to detect the presence of a biological threat agent. LFIs are based on the same technology utilized in home pregnancy test kits. A liquid sample is added to the sample well and the liquid flows down the surface membrane of the LFI via capillary action. After 15 minutes, if a biological agent is present, the antigen/antibody complex will form, producing a line that can be visibly detected by the operator.

Production

CRP LFIs are produced under ISO Guide 34 and ISO/IEC 17025 quality management systems. A schematic of the process is detailed below.

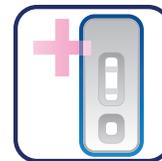
LFI Production



Antibodies are sent to the LFI strip manufacturer



LFI strips are made and sent for conformance testing



Upon positive testing results, strips are put into LFI assays



Products are stored or shipped to customers

Technology Applications

The LFI technology allows for the detection of various biological threat agents by antibodies specific for the molecule or organism of interest. Antibody-based detection technologies such as the LFI detect the presence of proteins, rather than genomic material as in the polymerase chain reaction. Due to their portable size and rapid results, LFIs are used often for presumptive biological agent detection in support of field operations. However, they do need to be confirmed by another method.

Catalog Offerings

The CRP Catalog contains over 14 biological threat agent-specific LFIs for operational and training use in single, 8-panel, and sampling kit formats. They are available for purchase by Government customers. To place orders online, please visit OSCAR – the Ordering System CRP Assays and Reagents – at <https://pki.jacks.jpeocbd.army.mil/crp/default.aspx>. For more information on how to register for a user account and view OSCAR tutorials, please visit the CRP's website at: <http://www.jpeocbd.osd.mil/packs/Default.aspx?pg=1205>.